

Essay 2

Why does a career in quantitative finance appeal to you? Based on your abilities and what you know about careers in financial engineering, why do you think this is the right career path for you? (Maximum 750 words)

Although there are a variety of areas a financial engineer could pursue, I see myself becoming a quantitative analyst, normally called “quant”. A quant’s primary responsibilities are to ensure that the current computerized trading programs are bug free and to develop better algorithms to adapt to the market in order to gain a steadily increasing return of the investment. In terms of a five-year goal, I will pursue a position of algorithmic trading quantitative analyst, who uses methods of various fields, such as game theory, econometrics and time series analysis. My final goal would be to become a hedge fund manager who could manage assets for his clients and help them make intelligent decisions on their investments.

To become a quant, one must have a passion for mathematics and computer programming. The daily job of a quant involves both programming and solving financial mathematical problems. Throughout my undergraduate study, I found myself a huge fan of mathematics. I have never been afraid of difficult problems and I am willing to sit down with a pile of paper and finish all sorts of inductions and derivations. In addition, I am extremely enthusiastic in programming. At UC Davis, we have an emphasis on C and C++. Even though I struggled through the first two courses due to my inexperience, being that they were my first encounters of the programming, I fell in love with it and became good at it when I learned data structure and algorithms. Hence, I am proficient in C/C++ due to the ample practices and experience I have had at school. In the financial engineering field, C++ turns out to be one of the most important languages, since lots of libraries used by financial engineers, such as QuantLib, are written in C++. Thus, experience and proficiency in C/C++ will largely facilitate my career as a quant.

Furthermore, programming, for most of the time, could be disheartening and frustrating. But I enjoy taking challenges and have never felt more fulfilled when I accomplish tasks that seem impossible. While at college, I have been in a lot of coding challenges where I needed to write programs that not only worked, but also were optimized. Every time I devoted time to a challenge, I loved thinking about a better way to speed up my program. I would think about it while walking, even on bed before I fell asleep. I felt refreshed and animated when I got up in the morning with a new algorithm and I was eager to test it right away. Numerous failures may take place before an acceptable solution. I learn to never give up but keep trying. Facing the same frustrations when multiple attempts were tried, a qualified quant needs to be perseverant and optimize programs in order to generate better returns. My traits of persistence and optimism fit me right in the position of a quant. One day, I

wandered around campus after I finished a coding challenge that beat my professor's golden version, thinking that it would be delightful if I could make a living doing what I love-coming up with new algorithms and solving problems.

Unlike jobs in Silicon Valley as a software programmer, a quant never stops learning. In order to keep up with the market and the advancements, a quant has a tendency to inquire both the cutting edge technologies as well as the news of the world. As an inquisitive person, I would love to become a quant where I can intake new knowledge everyday. I feel empowered when I gain more sufficient information. Moreover, the market changes everyday due to different events. Thus, problems and challenges are guaranteed. I could not live without them. Hence, a career as a quant can keep me motivated and driven.

Being a quant could be stressful due to the fast-paced working environment, which fits my personality because I consider myself to perform better under pressure. In college, I tended to take a lot of classes while participating in different activities. In order to keep up with my grades, I made myself to focus on one task at a time efficiently and never procrastinate. Years passed and I am used to the harried pace. In the whole, my dream is having a career that excites and challenges me. I love math; I love programming; I love finance; and I am pursuing my dream by becoming a quantitative analyst. (734 words)